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45    <223>  Ampicillin resistance (b-lactamase) promoter


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55    <223>  Ampicillin resistance (b-lactamase) promoter


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<220>

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                                          1               5
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ctg ctg ggc ctg agg cta cag ctc tcc ctg ggc atc atc cca gtt gag     5623
Leu Leu Gly Leu Arg Leu Gln Leu Ser Leu Gly Ile Ile Pro Val Glu
         10                  15                  20
```

```
gag gag aac ccg gac ttc tgg aac cgc gag gca gcc gag gcc ctg ggt     5671
Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu Ala Ala Glu Ala Leu Gly
         25                  30                  35
```

```
gcc gcc aag aag ctg cag cct gca cag aca gcc gcc aag aac ctc atc     5719
Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr Ala Ala Lys Asn Leu Ile
         40                  45                  50
```

```
atc ttc ctg ggc gat ggg atg ggg gtg tct acg gtg aca gct gcc agg     5767
Ile Phe Leu Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Ala Arg
55                  60                  65                  70
```

```
atc cta aaa ggg cag aag aag gac aaa ctg ggg cct gag ata ccc ctg     5815
```

```
       Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu Gly Pro Glu Ile Pro Leu
                       75              80              85

 5     gcc atg gac cgc ttc cca tat gtg gct ctg tcc aag aca tac aat gta        5863
       Ala Met Asp Arg Phe Pro Tyr Val Ala Leu Ser Lys Thr Tyr Asn Val
                       90              95             100

       gac aaa cat gtg cca gac agt gga gcc aca gcc acg gcc tac ctg tgc        5911
10     Asp Lys His Val Pro Asp Ser Gly Ala Thr Ala Thr Ala Tyr Leu Cys
                      105             110             115

       ggg gtc aag ggc aac ttc cag acc att ggc ttg agt gca gcc gcc cgc        5959
       Gly Val Lys Gly Asn Phe Gln Thr Ile Gly Leu Ser Ala Ala Ala Arg
15                120             125             130

       ttt aac cag tgc aac acg aca cgc ggc aac gag gtc atc tcc gtg atg        6007
       Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu Val Ile Ser Val Met
       135                 140             145             150

20     aat cgg gcc aag aaa gca ggg aag tca gtg gga gtg gta acc acc aca        6055
       Asn Arg Ala Lys Lys Ala Gly Lys Ser Val Gly Val Val Thr Thr Thr
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       cga gtg cag cac gcc tcg cca gcc ggc acc tac gcc cac acg gtg aac        6103
25     Arg Val Gln His Ala Ser Pro Ala Gly Thr Tyr Ala His Thr Val Asn
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       cgc aac tgg tac tcg gac gcc gac gtg cct gcc tcg gcc cgc cag gag        6151
       Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro Ala Ser Ala Arg Gln Glu
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       ggg tgc cag gac atc gct acg cag ctc atc tcc aac atg gac att gac        6199
       Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile Ser Asn Met Asp Ile Asp
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       gtg atc cta ggt gga ggc cga aag tac atg ttt cgc atg gga acc cca        6247
       Val Ile Leu Gly Gly Gly Arg Lys Tyr Met Phe Arg Met Gly Thr Pro
       215                 220             225                 230

40     gac cct gag tac cca gat gac tac agc caa ggt ggg acc agg ctg gac        6295
       Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln Gly Gly Thr Arg Leu Asp
                       235             240             245

       ggg aag aat ctg gtg cag gaa tgg ctg gcg aag cgc cag ggt gcc cgg        6343
45     Gly Lys Asn Leu Val Gln Glu Trp Leu Ala Lys Arg Gln Gly Ala Arg
                       250             255             260

       tat gtg tgg aac cgc act gag ctc atg cag gct tcc ctg gac ccg tct        6391
       Tyr Val Trp Asn Arg Thr Glu Leu Met Gln Ala Ser Leu Asp Pro Ser
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       gtg acc cat ctc atg ggt ctc ttt gag cct gga gac atg aaa tac gag        6439
       Val Thr His Leu Met Gly Leu Phe Glu Pro Gly Asp Met Lys Tyr Glu
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       atc cac cga gac tcc aca ctg gac ccc tcc ctg atg gag atg aca gag        6487
       Ile His Arg Asp Ser Thr Leu Asp Pro Ser Leu Met Glu Met Thr Glu
       295                 300             305             310

60     gct gcc ctg cgc ctg ctg agc agg aac ccc cgc ggc ttc ttc ctc ttc        6535
       Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro Arg Gly Phe Phe Leu Phe
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Val Glu Gly Gly Arg Ile Asp His Gly His His Glu Ser Arg Ala Tyr
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cgg gca ctg act gag acg atc atg ttc gac gac gcc att gag agg gcg    6631
Arg Ala Leu Thr Glu Thr Ile Met Phe Asp Asp Ala Ile Glu Arg Ala
            345             350             355

ggc cag ctc acc agc gag gag gac acg ctg agc ctc gtc act gcc gac    6679
Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu Ser Leu Val Thr Ala Asp
            360             365             370

cac tcc cac gtc ttc tcc ttc gga ggc tac ccc ctg cga ggg agc tcc    6727
His Ser His Val Phe Ser Phe Gly Gly Tyr Pro Leu Arg Gly Ser Ser
375             380             385             390

atc ttc ggg ctg gcc cct ggc aag gcc cgg gac agg aag gcc tac acg    6775
Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg Asp Arg Lys Ala Tyr Thr
            395             400             405

gtc ctc cta tac gga aac ggt cca ggc tat gtg ctc aag gac ggc gcc    6823
Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr Val Leu Lys Asp Gly Ala
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cgg ccg gat gtt acc gag agc gag agc ggg agc ccc gag tat cgg cag    6871
Arg Pro Asp Val Thr Glu Ser Glu Ser Gly Ser Pro Glu Tyr Arg Gln
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cag tca gca gtg ccc ctg gac gaa gag acc cac gca ggc gag gac gtg    6919
Gln Ser Ala Val Pro Leu Asp Glu Glu Thr His Ala Gly Glu Asp Val
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Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu Val His Gly Val Gln
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gag cag acc ttc ata gcg cac gtc atg gcc ttc gcc gcc tgc ctg gag    7015
Glu Gln Thr Phe Ile Ala His Val Met Ala Phe Ala Ala Cys Leu Glu
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ccc tac acc gcc tgc gac ctg gcg ccc ccc gcc ggc acc acc gac gcc    7063
Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro Ala Gly Thr Thr Asp Ala
            490             495             500

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Ala His Pro Gly Tyr Ser Arg Val Gly Ala Ala Gly Arg Phe Glu Gln
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Gly Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu
                20                  25                  30

Ala Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr
            35                  40                  45
```

```
          Ala Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser
              50                  55                  60

  5
          Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu
          65                  70                  75                  80

 10       Gly Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu
                              85                  90                  95

          Ser Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr
 15                       100                 105                 110

          Ala Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly
 20                   115                 120                 125

          Leu Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn
              130                 135                 140

 25
          Glu Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys Ser Val
          145                 150                 155                 160

 30       Gly Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Thr
                          165                 170                 175

          Tyr Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Val Pro
 35                   180                 185                 190

          Ala Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln Leu Ile
              195                 200                 205
 40
          Ser Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys Tyr Met
              210                 215                 220

 45
          Phe Arg Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr Ser Gln
          225                 230                 235                 240

 50       Gly Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp Leu Ala
                          245                 250                 255

          Lys Arg Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu Met Gln
 55                   260                 265                 270

          Ala Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe Glu Pro
                  275                 280                 285
 60
          Gly Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp Pro Ser
              290                 295                 300
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Leu Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg Asn Pro
305   310   315   320

Arg Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His
                325   330   335

His Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met Phe Asp
            340   345   350

Asp Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp Thr Leu
            355   360   365

Ser Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr
    370   375   380

Pro Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Arg
385   390   395   400

Asp Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro Gly Tyr
            405   410   415

Val Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu Ser Gly
            420   425   430

Ser Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Glu Glu Thr
        435   440   445

His Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His
    450   455   460

Leu Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val Met Ala
465   470   475   480

Phe Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala Pro Pro
            485   490   495

Ala Gly Thr Thr Asp Ala Ala His Pro Gly Tyr Ser Arg Val Gly Ala
            500   505   510

Ala Gly Arg Phe Glu Gln Thr
            515